View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Elsevier - Publisher Connector

Years Gained - LYG) and cost-utility analysis (Quality- Adjusted Life years – QALYs) were performed for a time horizon of 10 years according to a Markov economic model with four health states - "progression free survival (PFS) in first and second lines", "progression" and "death" - and monthly cycles. Health states transition probabilities were obtained from two randomized controlled clinical trials: PRIMA (Salles G. *et al* 2010) and EORTC 20981 (van Oers M. *et al* 2010). Health state utilities were obtained from literature (Pettengell R. *et al* 2008). Resource consumption was estimated by a Portuguese expert's panel. Costs were calculated considering the Portuguese Health System perspective through official data (unit costs: € in 2014). Costs and consequences were discounted at 5% *per annum*. Deterministic and probabilistic (Monte Carlo simulation) sensitivity analyses were performed for several assumptions namely time horizon, PFS supportive care and progression costs; adverse events costs; health states utilities values and costs and benefits annual discount. **RESULTS:** For a 10 years' time horizon, the cost per LYG and QALYs gained was €10,630 and €10,674 respectively. Sensitivity analyses confirmed the base case results for time horizons of 20 and 30 years, ranging between €7,430 and €7,155 per QALY gained, respectively. Probabilistic sensitivity analysis confirmed the robustness of the model with a cost per QALY gained of €10,657. The incremental cost-effectiveness acceptability curve shows that rituximab maintenance therapy would be cost effective from a willingness to pay of €12,000 per QALY gained. **CONCLUSIONS:** According to the present model rituximab maintenance treatment of FL patients who respond to first line induction therapy compared with observation is a cost-effective strategy in Portugal.

PSY55

THE COST-EFFECTIVENESS OF EXPANDING THE NHS NEWBORN BLOODSPOT SCREENING PROGRAMME TO INCLUDE HOMOCYSTINURIA (HCU), MAPLE SYRUP URINE DISEASE (MSUD), GLUTARIC ACIDURIA TYPE 1 (GA1), ISOVALERIC ACIDAEMIA (IVA), AND LONG-CHAIN HYDROXYACYL-COA DEHYDROGENASE DEFICIENCY (LCHADD)

Bessey A[1], Chilcott J[2], Pandor A[1], Paisley S[1]

[1]*The University of Sheffield, Sheffield, UK,* [2]*University of Sheffield, Sheffield, UK*

OBJECTIVES: The NHS newborn bloodspot screening programme currently screens all babies in England for five rare conditions. The objective of this study was to assess the cost-effectiveness of expanding the screening programme to include five new rare conditions all inborn errors of the metabolism; HCU, MSUD, GA1, IVA, and LCHADD. **METHODS:** A decision tree model was built to estimate the cost-effectiveness of the expanded newborn screening programme. Estimates of the prevalence of the five conditions and the test characteristics of screening were taken from the literature. Survival and morbidity estimates for the screened and unscreened populations were estimated from published case series. Quality adjusted life years (QALYS) were estimated from the extended EQ-5D+ (C) which includes a cognitive dimension in order to capture the impact of neurological impairment and developmental delay which are known sequelae of the five conditions. Costs related to the marginal cost of the expanded screening programme, management costs of the conditions, and costs associated with the sequelae of the conditions were estimated from the pilot study of the expanded screening, case reports from the pilot, expert elicitation, published guidelines and estimates from the literature. Costs and QALYs were multiplied by survival and morbidity estimates to give lifetime estimates for the screened and unscreened populations. A probabilistic sensitivity analysis (PSA) was conducted. **RESULTS:** The results from the deterministic analysis and PSA suggests that screening for all five conditions is cost-saving with screening associated with lower total costs and higher total QALYs compared to no screening. The incremental net benefit for all five conditions, at a threshold of £25,000 per QALY, was between £0.46 for IVA and £5.94 for GA1. **CONCLUSIONS:** Screening for MSUD, HCU, IVA, GA1 and LCHADD are each estimated to be potentially cost saving and result in increased quality of life compared to no screening.

PSY56

COST-EFFECTIVENESS OF CAPSAICIN 8% PATCH (QUTENZA™) COMPARED WITH PREGABALIN FOR THE TREATMENT OF PATIENTS WITH PERIPHERAL NEUROPATHIC PAIN (PNP) IN SCOTLAND

Patel S[1], Trueman D[2], Bentley A[2], Poole C[1], Chambers C[1]

[1]*Astellas Pharma Europe Ltd, Chertsey, UK,* [2]*Abacus International, Bicester, UK*

OBJECTIVES: PNP is a high-burden disease exacerbated by poor tolerability of conventional oral therapies. Capsaicin 8% patch is a well-tolerated cutaneous treatment for PNP in non-diabetic adults either alone or in combination with other therapies. We evaluated the cost-effectiveness of capsaicin 8% patch versus pregabalin in patients with PNP from the perspective of NHS Scotland. **METHODS:** A decision tree model was developed considering patients with PNP who had neither achieved pain relief nor tolerated conventional first-/second-line treatments. After 8 weeks' treatment with capsaicin 8% patch or pregabalin, patients remained on therapy or discontinued due to intolerable adverse events. Patients continuing on therapy were classified as either responders (≥30% decrease in pain from baseline) or non-responders. Last-line therapy was given to non-responders and those who discontinued treatment. The base-case time horizon was 2 years. Effectiveness, discontinuations and quality of life utilities were estimated from a recent head-to-head study (ELEVATE; NCT01713426). Other inputs were obtained from published sources or clinical expert opinion. All costs were based on GBP 2013/14. The results were presented as incremental cost-effectiveness ratios (ICERs), i. e. cost per quality-adjusted life-year (QALY) gained. Model assumptions were tested with scenario analyses. Parameter uncertainty was tested using one-way and probabilistic sensitivity analyses. **RESULTS:** Compared with pregabalin, capsaicin 8% patch was dominant versus pregabalin (total cost difference, –£11 and total QALY gains, +0.049). Using a 1-year time horizon, the ICER increased to £1,242/QALY. The model was most sensitive to variations in time to capsaicin 8% patch retreatment (worse case ICER, £7,951/QALY). Capsaicin 8% patch was dominant in six/seven scenario analyses. At a willingness-to-pay threshold of £20,000/QALY gained, the probability of cost-effectiveness for capsaicin 8% patch versus pregabalin was 97%. **CONCLUSIONS:** Capsaicin 8% patch is cost-effective compared to pregabalin for patients who have failed one or more previous systemic treatments for PNP.

PSY57

COST EFFECTIVENESS ANALYSIS EVALUATING FACTOR VIII AS PRIMARY PROPHYLAXIS TREATMENT FOR PATIENTS WITH SEVERE HAEMOPHILIA A IN THE NETHERLANDS

Kip M[1], van den Bosch M[2], Fischer K[3], Tamminga R[4], Lepage-Nefkens I[1]

[1]*PANAXEA, Enschede, The Netherlands,* [2]*Bayer, Mijdrecht, The Netherlands,* [3]*Van Creveldkliniek & Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, The Netherlands,* [4]*Beatrix Childrens Hospital, University Medical Center Groningen, Groningen, The Netherlands*

OBJECTIVES: Multiple regimens are used in the treatment of severe haemophilia A in the Netherlands. Most patients receive clotting factors intravenously 2-3 times weekly to prevent bleedings: intermediate dose prophylaxis. Given the high utilization of prophylaxis treatment, budget restraints might hinder the availability of prophylaxis for patients in the nearby future. Other treatment regimens are on-demand (OD) treatment, administering clotting factors in case of bleedings, and prophylaxis treatment with a switch to OD at 18 years. This analysis estimates the cost-effectiveness of Dutch prophylaxis treatment for severe haemophilia A patients compared to other treatment regimens. **METHODS:** A Markov model is developed with the health stages 'Alive', 'Severe joint damage' and 'Death'. Bleeding rates of individual patients are simulated over lifetime, including a probability of inhibitor development. A higher joint bleed rate is accompanied by increased joint damage, increasing the chance of joint surgery. Disease progression, within the Alive health state, is modeled with the Pettersson Score (PS). The PS indicates the radiographic arthropathy. Increased joint damage is associated with physical limitations and decreased QoL. Because the chosen treatment regimen affects both the joint bleed rate and inhibitor development, it also affects the HRQoL. The analysis was performed from a societal perspective. **RESULTS:** Prophylaxis treatment was associated with the greatest QoL. The cost-effectiveness acceptability curve shows a probability of 90% for prophylaxis treatment to be cost-effective at a threshold of €0, - compared to OD treatment. Compared to prophylaxis with a switch to OD at 18 years, prophylaxis treatment has a 50% probability of being cost-effective at a €80.000, - threshold. The model outcome is sensitive for variations in bleeding rate, prophylaxis dosage, inhibitor development and utilities. **CONCLUSIONS:** Based on our model, treatment of severe haemophilia A patients with lifetime prophylaxis is cost-effective compared to OD treatment.

PSY58

COST-EFFECTIVENESS OF THE LIDOCAINE 5% MEDICATED PLASTER VERSUS PREGABALIN AND AMITRIPTYLINE FOR THE TREATMENT OF POST-HERPETIC NEURALGIA IN THE NETHERLANDS

Obradovic M[1], Vanden Baviere H[2], Liedgens H[3]

[1]*GfK Market Access, Nuremberg, Germany,* [2]*Grünenthal, St Stevens Woluwe, Belgium,* [3]*Grünenthal GmbH, Aachen, Germany*

OBJECTIVES: The objective of the analysis was to evaluate costs and outcomes of treating post-herpetic neuralgia (PHN), a chronic disease with severe burden for patients, in the Netherlands with lidocaine 5% medicated plaster compared to pregabalin and amitriptyline. **METHODS:** A Markov model was used to extrapolate outcomes beyond the time horizon of the available trial data and to allow for the fact that patients may discontinue treatment at any point during treatment. Costs and effects, expressed in terms of the quality-adjusted life-year (QALY) gained, were calculated for each treatment strategy over a period of 6 months. The study included direct costs related to PHN. Indirect costs were not included as most patients with PHN are older and retired. Transition probabilities were based on the comparative and long-term clinical trials. Utilites were identified through a literature review. Resource utilization was obtained from a two-step Delphi study with pain specialists, cost data were obtained from the official price tariffs/lists. Extensive sensitivity and scenario analyses were performed to explore robustness of the results. **RESULTS:** In 6-month time horizon, treatment with the lidocaine plaster yielded 0.4283 QALYs. For pregabalin and amitriptyline the total effect was 0.3390 QALYs. The mean costs per patient treated with lidocaine plaster (1.71 plasters/day) were 1,082 €. For pregabalin (488 mg/day) and amitriptyline (25 mg/day) the mean costs were 912 € and 346 €, respectively. Therefore, the lidocaine plaster compared to pregabalin and amitriptyline had an incremental cost-effectiveness ratio of 1,907 €/QALY and 8,246 €/QALY, respectively. Probability of the lidocaine plaster being cost-effective versus pregabalin and amitriptyline exceeded 90% when considering a threshold of 30,000 € per QALY gained. Extensive scenario and one-way sensitivity analyses confirmed robustness of the results. **CONCLUSIONS:** The lidocaine 5% plaster is a highly cost-effective treatment for PHN in the Netherlands.

PSY59

COST-EFFECTIVENESS ANALYSIS OF AMFEPRAMONE (DIETHYLPROPION) FOR THE OBESITY TREATMENT IN MEXICO

Soto Molina H[1], Díaz Martínez JP[1], Escobar Juárez Y[1], Fernández del Valle C[2]

[1]*HS Estudios Farmacoeconómicos, Mexico City, Mexico,* [2]*Instituto Politécnico Nacional, Mexico city, Mexico*

OBJECTIVES: The main objective was to perform a pharmacoeconomic analysis to find out the cost effectiveness of diethylpropion (DEP) with diet and exercise. (DEP+DaE), compared against Diet and Exercise (DaE) in the treatment for obesity from the institutional point of view in Mexico. **METHODS:** Effectiveness data from a mexican clinical trial (Morin, 2007) was used to populate a decision tree model to estimate the cost-effectiveness of DEP+DaE and its comparator DaE. The target population were men and women over 18 years with BMI >30 kg/m2. Principal outcome was the reduction of the Body Mass Index (BMI); benefit was expressed as the percentage of patients who reduced more than 10% of their initial weight. Only direct medical costs were used, such as medications and adverse events; these were obtained from the portal shop by IMSS and also from their unitary costs. To prove the